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SAP Enterprise Architect Global Summit

Virtual Event - March 1-3, 2022



Reference Business and Solution Architecture – Content Strategy and Examples

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INTERNAL

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Agenda

The SAP Enterprise Architecture Framework

Motivation and Value of Reference Architecture Content

Reference Business Architecture (RBA)

Reference Solution Architecture (RSA)

How to consume RBA / RSA content

The SAP Enterprise Architecture Framework



SAP EA Framework

SAP EA Framework

SAP EA Methodology

Proven methodology based on TOGAF, adopted widely throughout SAP.

SAP EA Tooling

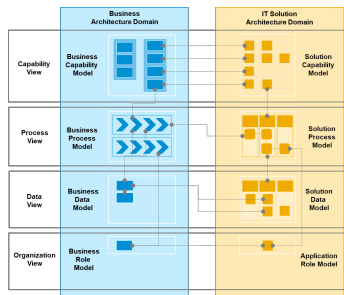
SAP EA toolchain consists of solutions like Signavio, CALM, PMG, API Hub which support the authoring and/or publishing and consumption of SAP EA Content.

SAP EA Content

SAP Reference Business and Solution Architecture provides standardized, high quality EA content (APQC based) to describe the complete business scope of enterprises mapped to SAP (reference) solutions.

SAP EA Services

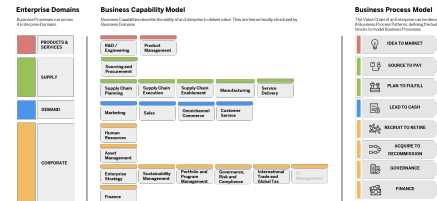
Standardized, packaged SAP EA Service offerings support customer transformations



SAP SIGNAVIO
SAP Product Map Generator

SAP SAP Cloud ALM

SAP SAP API Hub



➔

Session Use of SAP Reference Architectures and Supporting Tools in Services

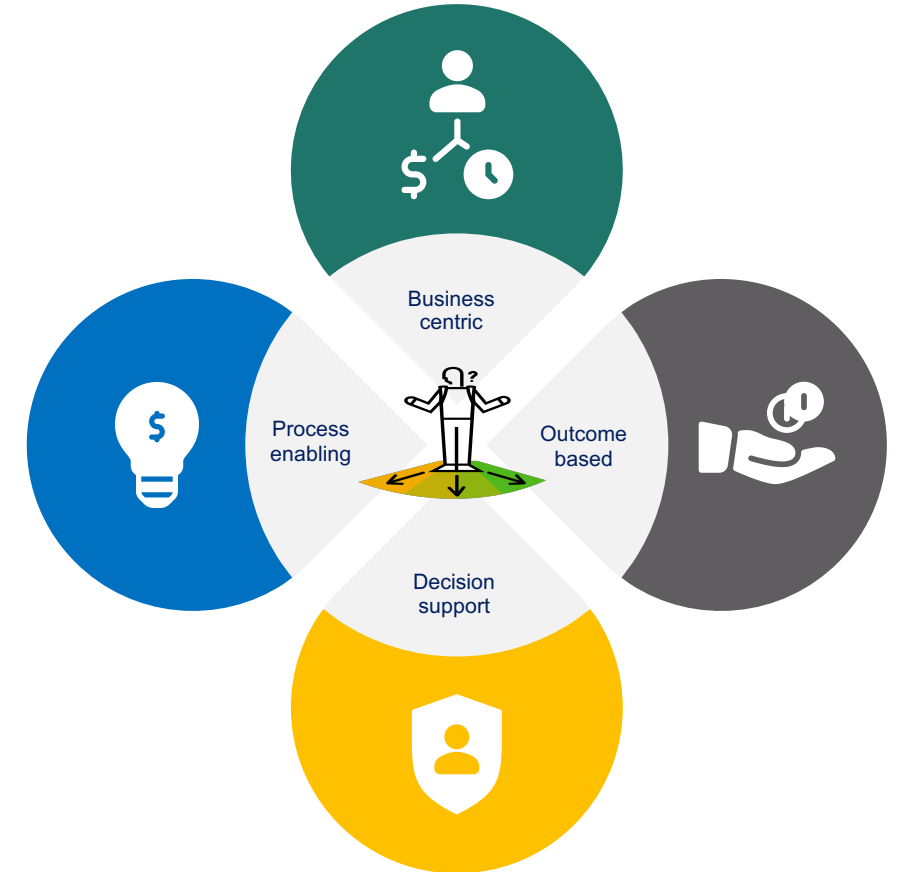
Reference Architecture Content

Motivation & Value



Motivation and Value of the SAP EA Reference Content

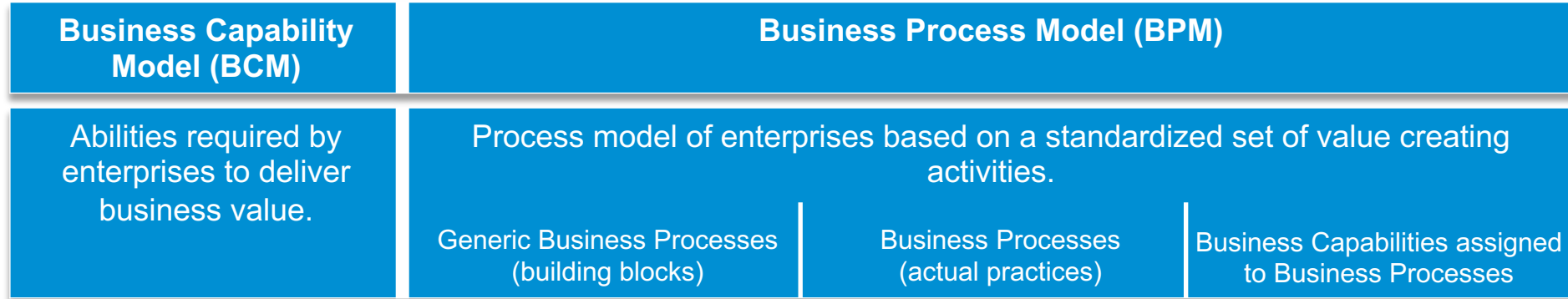
- ✓ Provide **transparency and insight** to the SAP IT portfolio.
- ✓ Enable customers to select and buy IT solutions based on **business scope / outcome** rather than technology.
- ✓ Make IT transformation decisions based on guided **recommendations**.
- ✓ Enable **self-service and navigation** throughout the transformation – especially in a Cloud environment where much of the customer engagement is digitized.
- ✓ Increase **customer experience** through consistent and common terminology.
- ✓ Enable faster and smarter **business decisions**.
- ✓ Deliver **detailed process and integration information** for implementations and customer extensions.



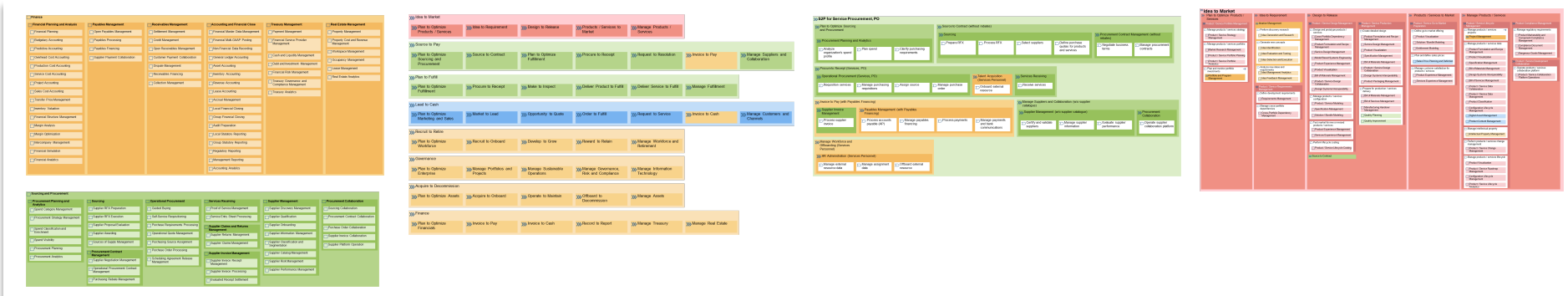
Reference Business Architecture



SAP Reference Business Architecture – Content Overview and Benefits



Note: Business Data Model and Business Organization Model are subject to roadmap.



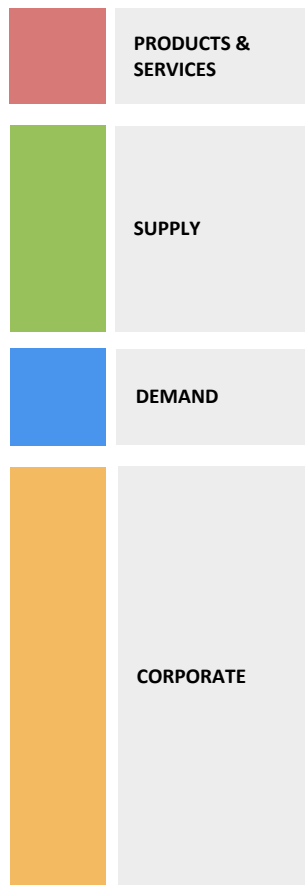
- Understand the underlying end-to-end business processes, capabilities, scope and value
- Understand required data/information and metrics
- Use the business processes and capabilities as entry point for a business-driven scoping and heat-mapping

SAP Reference Business Architecture – Core Elements

The Value of an Integrated Capability and Process Model

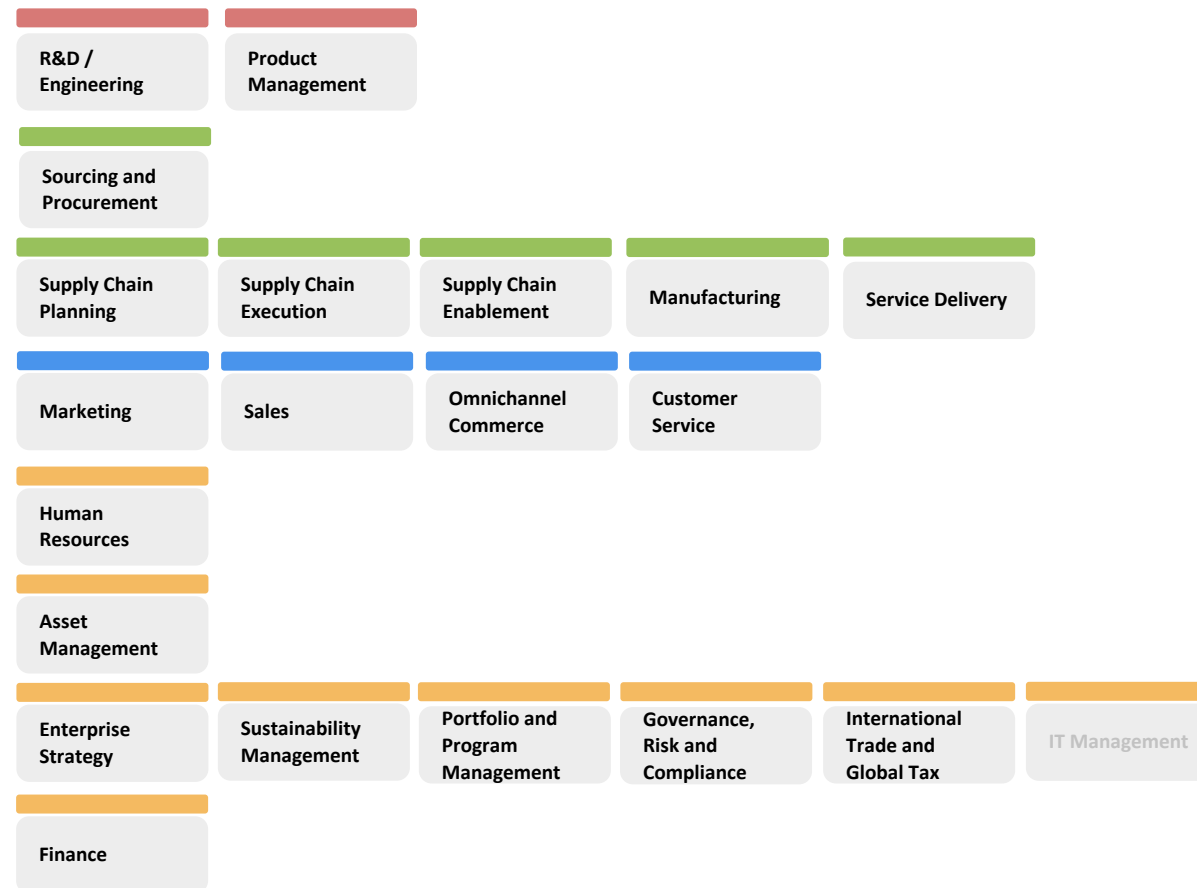
Enterprise Domains

Businesses can be structured along the 4 Enterprise Domains.



Business Capability Model

Business Capabilities describe the ability of an Enterprise to deliver value. They are hierarchically structured by Business Domains.



Business Process Model

The Value Chain of an Enterprise can be described by 8 Generic Business Processes, defining the building blocks and structure to model Business Processes.



Example: Products & Services Business Capabilities

Products & Services

R&D / Engineering

Product / Service Portfolio Management

Product / Service Strategy Management

Market Research Management

Product / Service Portfolio Planning

Product / Service Portfolio Analytics

Product / Service Requirements Management

Requirements Management

Cross-Portfolio Dependency Management

Product / Service Design Management

Service Design Management

Product Formulation and Recipe Management

Model Based Systems Engineering

Product / Service Modeling

Specification Management

Product / Service Lifecycle Costing

Product / Service Production Management

Bill of Materials Management

Bill of Services Management

Product Packaging Management

Manufacturing Handover Management

Product Compliance Management

Product Marketability and Component Compliance Management

Compliance Document Management

Dangerous Goods Management

Product / Service Development Collaboration

Product / Service Data Collaboration

Product / Service Design Collaboration

Product / Service Collaboration Platform Operations

Product Management

Product / Service Go-to-Market Preparation

Solution / Bundle Modeling

Product Experience Management

Services Experience Management

Entitlement Modeling

Product / Service Lifecycle Management

Product / Service Data Management

Design Systems Interoperability

Product / Service Change Management

Product Classification

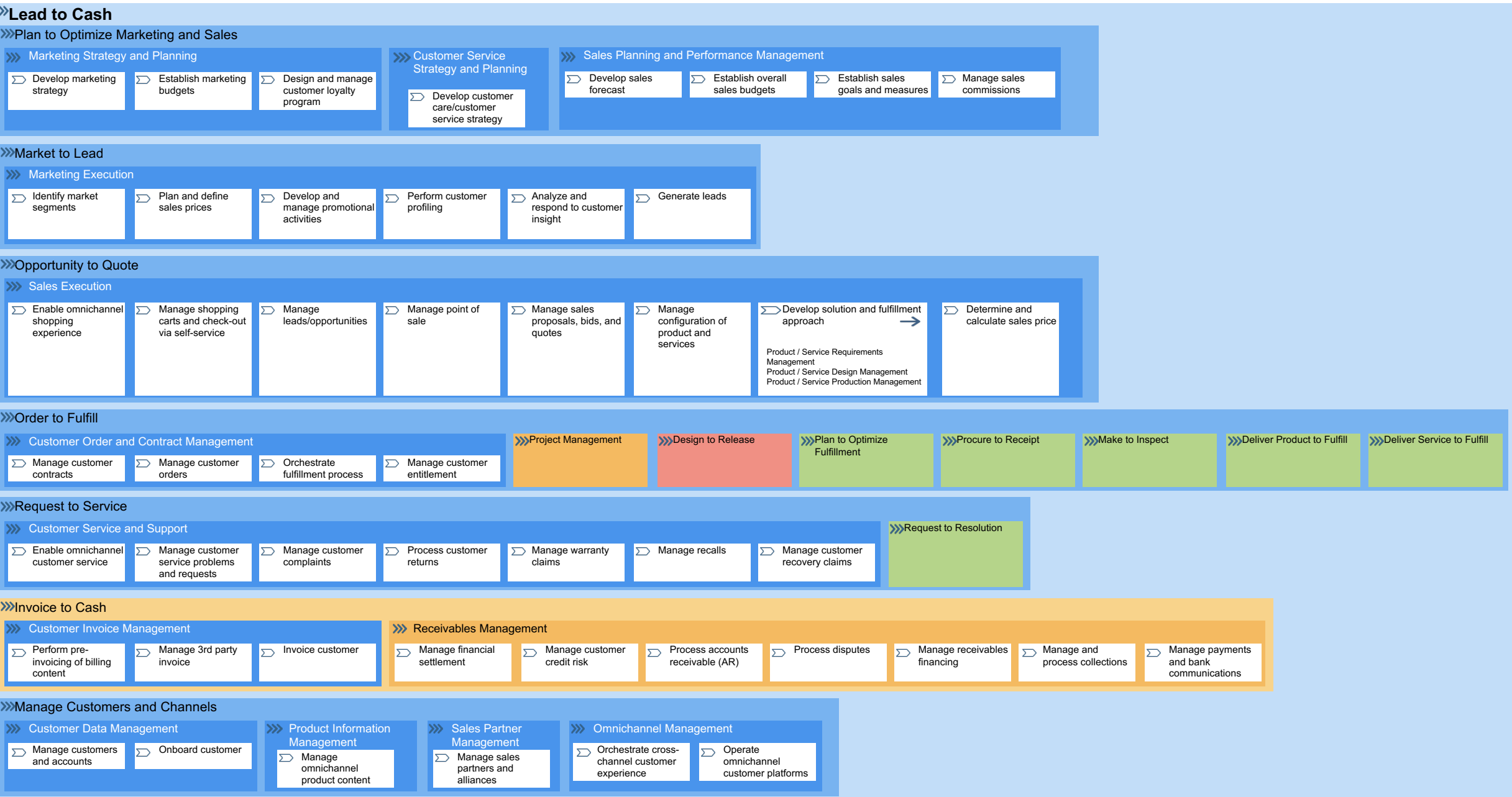
Product / Service Roadmap Management

Configuration Lifecycle Management

Product Visualization

Product / Service Lifecycle Analytics

Example: Lead to Cash Generic Business Process



Please see notes section of slide for descriptions

Example: Idea to Market Process Pattern with assigned Business Capabilities

»» Idea to Market

»» Plan to Optimize Products / Services

»» Product / Service Portfolio Management

- ▷ Manage products / services strategy
 - Product / Service Strategy Management
- ▷ Manage products / services portfolio
 - Market Research Management
 - Product / Service Portfolio Planning
 - Product / Service Portfolio Analytics
- ▷ Plan and monitor portfolio investments
 - Portfolio and Program Management

»» Idea to Requirement

»» Ideation Management

- ▷ Perform discovery research
 - Idea Generation and Research
- ▷ Generate new concepts
 - Idea Identification
 - Idea Evaluation and Testing
 - Idea Selection and Execution
- ▷ Analyze new ideas and requirements
 - Idea Management Analytics
 - Idea Feedback Management

»» Product / Service Requirements Management

- ▷ Define development requirements
 - Requirements Management
- ▷ Manage cross-portfolio dependencies
 - Cross-Portfolio Dependency Management

»» Design to Release

»» Product / Service Design Management

- ▷ Design and prototype products / services
 - Cross-Portfolio Dependency Management
 - Product Formulation and Recipe Management
 - Service Design Management
 - Model Based Systems Engineering
 - Product Experience Management
 - Product Visualization
 - Bill of Materials Management
 - Product / Service Design Collaboration
 - Design Systems Interoperability
- ▷ Manage products / services configuration
 - Product / Service Modeling
 - Specification Management
 - Solution / Bundle Modeling
- ▷ Test market for new or revised products / services
 - Product Experience Management
 - Services Experience Management
- ▷ Perform lifecycle costing
 - Product / Service Lifecycle Costing

»» Source to Contract

»» Product / Service Production Management

- ▷ Create detailed design
 - Product Formulation and Recipe Management
 - Service Design Management
 - Product Visualization
 - Specification Management
 - Bill of Materials Management
 - Product / Service Design Collaboration
 - Design Systems Interoperability
 - Product Packaging Management
- ▷ Prepare for production / services delivery
 - Bill of Materials Management
 - Bill of Services Management
 - Manufacturing Handover Management
 - Quality Planning
 - Quality Improvement

»» Products / Services to Market

»» Product / Service Go-to-Market Preparation

- ▷ Define go-to market offering
 - Product Visualization
 - Solution / Bundle Modeling
 - Entitlement Modeling
- ▷ Plan and define sales prices
 - Sales Price Planning and Definition
- ▷ Manage customer satisfaction for products / services
 - Product Experience Management
 - Services Experience Management

»» Manage Products / Services

»» Product / Service Lifecycle Management

- ▷ Manage products / services projects
 - Project Management
- ▷ Manage products / services data
 - Product Formulation and Recipe Management
 - Product Visualization
 - Specification Management
 - Bill of Materials Management
 - Design Systems Interoperability
 - Bill of Services Management
 - Product / Service Data Collaboration
 - Product / Service Data Management
 - Product Classification
 - Configuration Lifecycle Management
 - Digital Asset Management
 - Product Content Management
- ▷ Manage intellectual property
 - Intellectual Property Management
- ▷ Perform products / services change management
 - Product / Service Change Management
- ▷ Manage products / services lifecycle
 - Product Visualization
 - Product / Service Roadmap Management
 - Configuration Lifecycle Management
 - Product / Service Lifecycle Analytics

»» Product Compliance Management

- ▷ Manage regulatory requirements
 - Product Marketability and Component Compliance Management
 - Compliance Document Management
 - Dangerous Goods Management

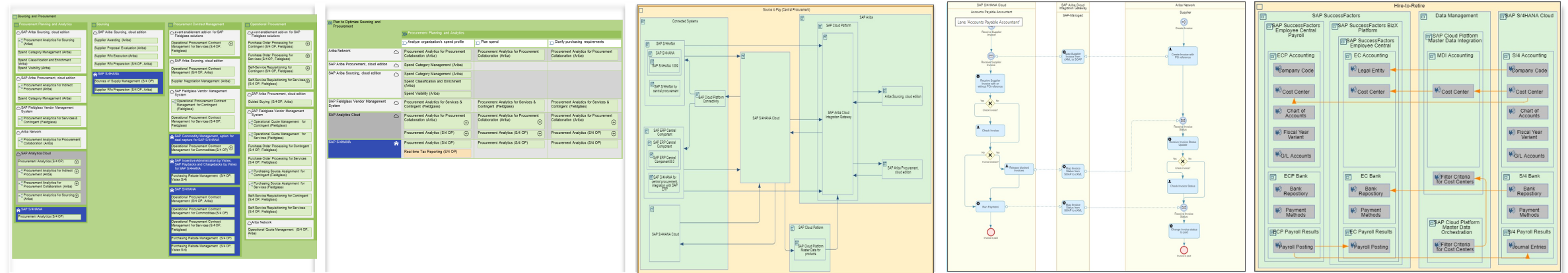
»» Product / Service Development Collaboration

- ▷ Operate products / services collaboration platform
 - Product / Service Collaboration Platform Operations

Reference Solution Architecture



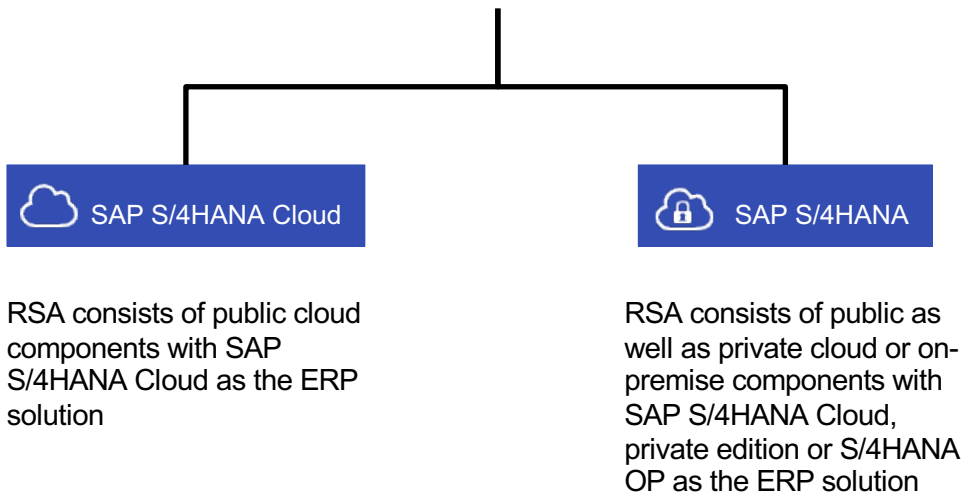
SAP Reference Solution Architecture – Content Overview and Benefits



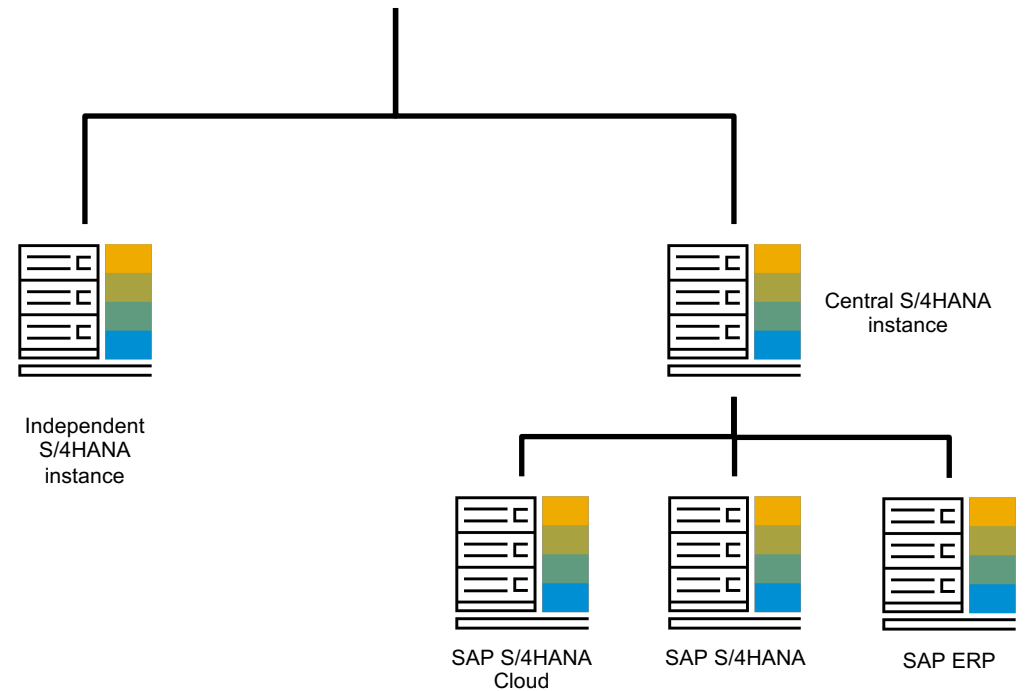
- Obtain an implementable SAP reference architecture showing how the components interact to support the business process
- Explore how process implementations can be broken down to APIs with all the integration content being linked
- Leverage the content to define your own target architecture based on specific needs

Characteristics of Reference Solution Architectures

Cloud vs. Hybrid



Standard vs. Central

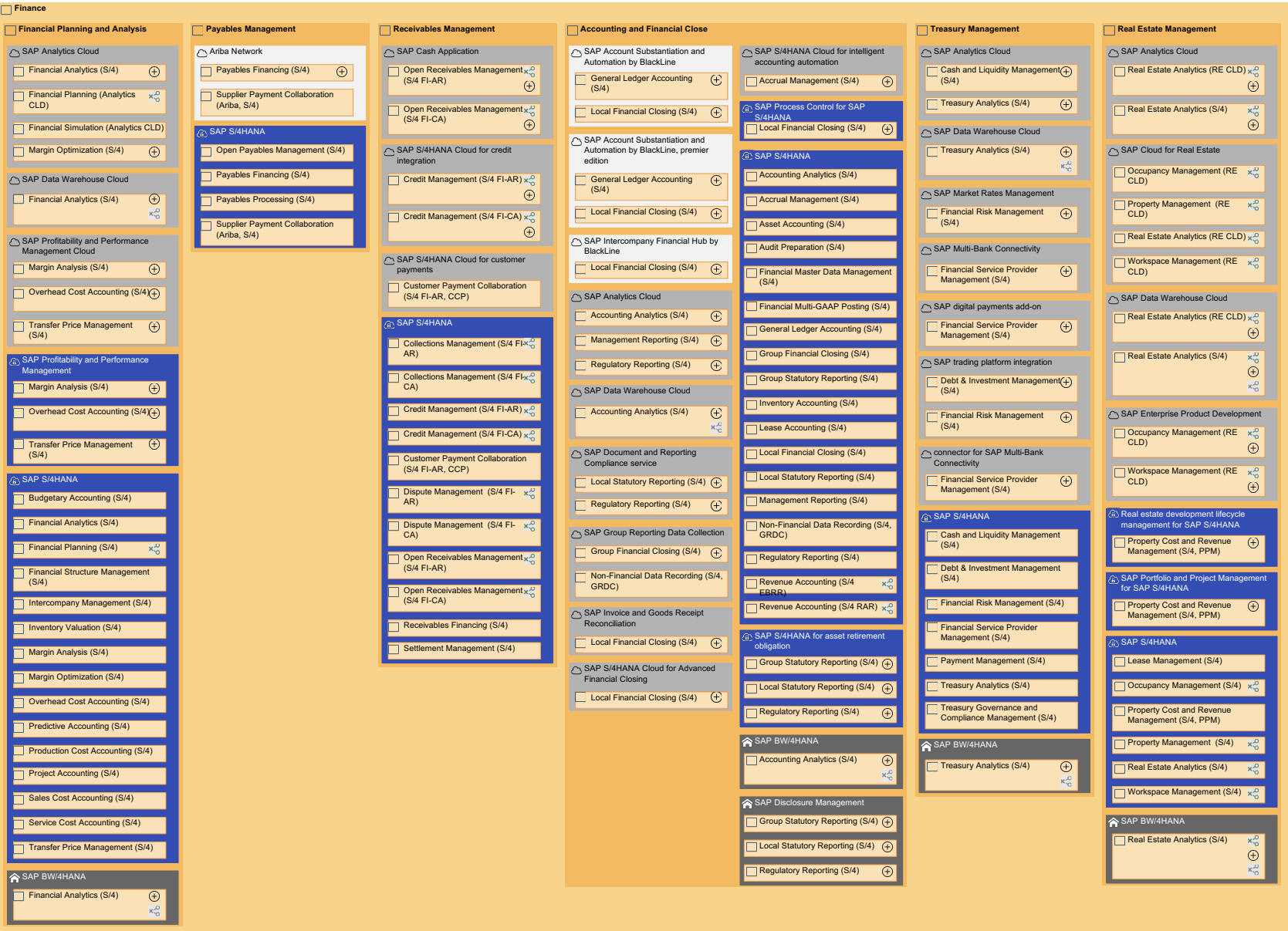


One Central S/4HANA Cloud or S/4HANA instance connecting to / orchestrating multiple de-central S/4HANA Cloud or S/4HANA or ERP instances.

Example: Sourcing and Procurement – L2 Solution Component Map (Hybrid)

Supply									
☐ Sourcing and Procurement									
	☐ Procurement Planning and Analytics	☐ Sourcing	☐ Procurement Contract Management	☐ Operational Procurement	☐ Services Receiving	☐ Supplier Claims and Returns Management	☐ Supplier Invoice Management	☐ Supplier Management	☐ Procurement Collaboration
Cloud	<ul style="list-style-type: none"> ☁ Ariba Network ☁ SAP Ariba Procurement, cloud edition ☁ SAP Ariba Sourcing, cloud edition ☁ SAP Fieldglass Vendor Management System 	<ul style="list-style-type: none"> ☁ SAP Ariba Sourcing, cloud edition 	<ul style="list-style-type: none"> ☁ SAP Ariba Sourcing, cloud edition ☁ SAP Fieldglass Vendor Management System ☁ event enablement add-on for SAP Fieldglass solutions 	<ul style="list-style-type: none"> ☁ Ariba Network ☁ SAP Ariba Procurement, cloud edition ☁ SAP Fieldglass Vendor Management System ☁ event enablement add-on for SAP Fieldglass solutions 	<ul style="list-style-type: none"> ☁ SAP Fieldglass Vendor Management System ☁ event enablement add-on for SAP Fieldglass solutions 		<ul style="list-style-type: none"> ☁ SAP Fieldglass Vendor Management System ☁ SAP Information Capture by OpenText ☁ event enablement add-on for SAP Fieldglass solutions 	<ul style="list-style-type: none"> ☁ Ariba Network ☁ SAP Ariba Procurement, cloud edition ☁ SAP Ariba Sourcing, cloud edition ☁ SAP Fieldglass Vendor Management System 	<ul style="list-style-type: none"> ☁ Ariba Network ☁ SAP Ariba Sourcing, cloud edition ☁ SAP Fieldglass Vendor Management System
Cloud (BTP)	<ul style="list-style-type: none"> ☁ SAP Analytics Cloud ☁ SAP Data Warehouse Cloud 	<ul style="list-style-type: none"> ☁ SAP Ariba Cloud Integration Gateway 	<ul style="list-style-type: none"> ☁ SAP Ariba Cloud Integration Gateway 	<ul style="list-style-type: none"> ☁ SAP Ariba Cloud Integration Gateway ☁ SAP Procurement Intelligence 					
Cloud (S4)									
Private Cloud (S4)	<ul style="list-style-type: none"> 🔒 SAP S/4HANA 	<ul style="list-style-type: none"> 🔒 SAP S/4HANA 	<ul style="list-style-type: none"> 🔒 SAP Commodity Management, option for deal capture for SAP S/4HANA 🔒 SAP S/4HANA 	<ul style="list-style-type: none"> 🔒 SAP S/4HANA 	<ul style="list-style-type: none"> 🔒 SAP S/4HANA 	<ul style="list-style-type: none"> 🔒 SAP S/4HANA 	<ul style="list-style-type: none"> 🔒 SAP Invoice Management foundation by OpenText for SAP S/4HANA 🔒 SAP S/4HANA 	<ul style="list-style-type: none"> 🔒 SAP S/4HANA 	
OP	<ul style="list-style-type: none"> 🏠 SAP BW/4HANA 								

Example: Finance - Solution Component Map (Hybrid)



Example: Record to Report - Solution Value Flow (Hybrid)

Record to Report				
Accounting and Financial Close				
	Create financial record	Perform financial accounting	Perform financial closing	Perform financial reporting
SAP Account Substantiation and Automation by BlackLine		General Ledger Accounting (S/4)	Local Financial Closing (S/4)	
SAP Account Substantiation and Automation by BlackLine, premier edition		General Ledger Accounting (S/4)	Local Financial Closing (S/4)	
SAP Intercompany Financial Hub by BlackLine			Local Financial Closing (S/4)	
SAP Analytics Cloud				Regulatory Reporting (S/4) Management Reporting (S/4) Accounting Analytics (S/4)
SAP Cash Application		Open Receivables Management (S/4 FI-AR) Open Receivables Management (S/4 FI-CA)		
SAP Data Warehouse Cloud				Accounting Analytics (S/4)
SAP Document and Reporting Compliance service				Local Statutory Reporting (S/4) Regulatory Reporting (S/4)
SAP Group Reporting Data Collection	Non-Financial Data Recording (S/4, GRDC)		Group Financial Closing (S/4)	
SAP Invoice and Goods Receipt Reconciliation			Local Financial Closing (S/4)	
SAP S/4HANA Cloud for Advanced Financial Closing			Local Financial Closing (S/4)	
SAP S/4HANA Cloud for intelligent accounting automation		Accrual Management (S/4)		
SAP Process Control for SAP S/4HANA			Local Financial Closing (S/4)	
SAP S/4HANA	Financial Master Data Management (S/4)	General Ledger Accounting (S/4)	Local Financial Closing (S/4)	Local Statutory Reporting (S/4)
	Financial Multi-GAAP Posting (S/4)	Open Receivables Management (S/4 FI-AR)	Group Financial Closing (S/4)	Group Statutory Reporting (S/4)
	Non-Financial Data Recording (S/4, GRDC)	Open Receivables Management (S/4 FI-CA)	Financial Structure Management (S/4)	Regulatory Reporting (S/4)
		Open Payables Management (S/4)	Audit Preparation (S/4)	Management Reporting (S/4)
		Asset Accounting (S/4)		Accounting Analytics (S/4)
		Inventory Accounting (S/4)		
		Revenue Accounting (S/4 RAR)		
		Revenue Accounting (S/4 EBRR)		
		Lease Accounting (S/4)		
		Accrual Management (S/4)		
SAP S/4HANA for asset retirement obligation				Local Statutory Reporting (S/4) Group Statutory Reporting (S/4) Regulatory Reporting (S/4)
SAP BW/4HANA				Accounting Analytics (S/4)
SAP Disclosure Management				Local Statutory Reporting (S/4) Group Statutory Reporting (S/4) Regulatory Reporting (S/4)

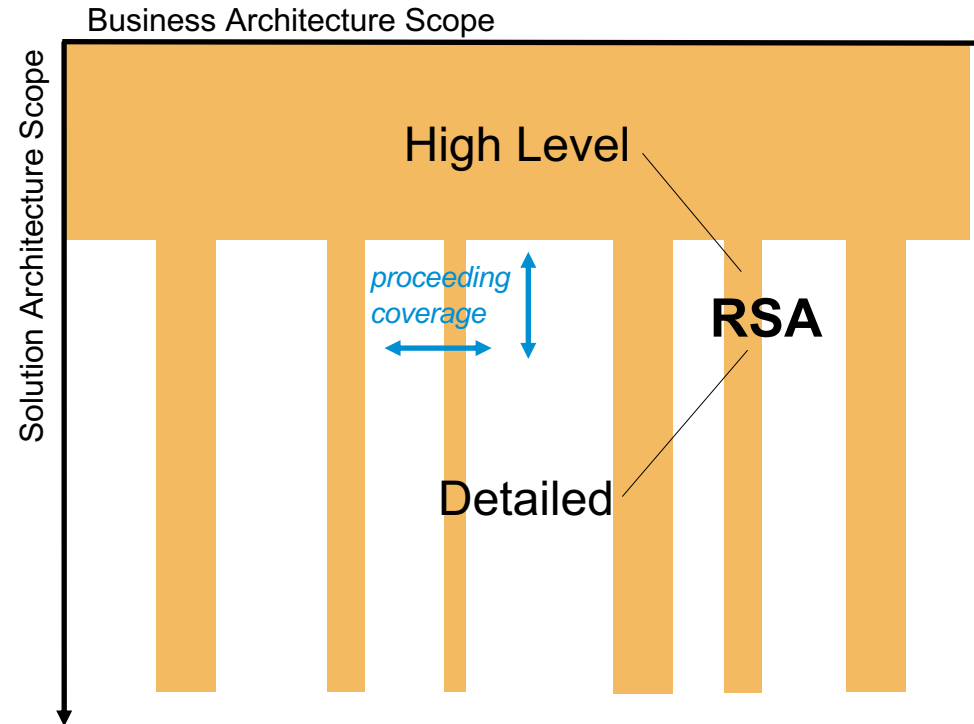
Coverage of High Level and Detailed Reference Solution Architecture (RSA)

High Level RSA

- Covers entire Business Scope but only High Level Solution Scope
- Not validated via integration test, may contain integration gaps

Detailed RSA

- Covers selected Business and Solution Scope
- Validated via integration test



- Solution Capability / Component Maps
- Solution Value Flows
- Solution Component Diagrams
- Solution Process Flows (BPMN)
- Solution Data Flows
- Drilldown to further artifacts (APIs, events, iFlows, data models,...)

The SAP Intelligent Enterprise Program

Deliver the Integrated, Intelligent Suite to Intelligent Enterprises

Intelligent Enterprises apply leading-edge industry practices, build flexible and resilient value chains, infuse AI and Machine Learning to business processes, act sustainable, apply advanced technologies, ...

>>> Approach

- Definition of **suite qualities**








- Drive the SAP development process and along **integrated business processes, the suite qualities and AI/ML infusion** ([SAP Strategy Paper](#)).
- **Holistically integrate** business processes, data and technology to overcome siloed IT landscapes
- Establish **Reference Solution Architecture** creation as **engineering practice**, from concept to validation based on Reference Business Architecture
- **Share** with customer & partners (today via the [SAP API Business Hub](#))

Reference Solution Architecture

Various Process Architecture Views

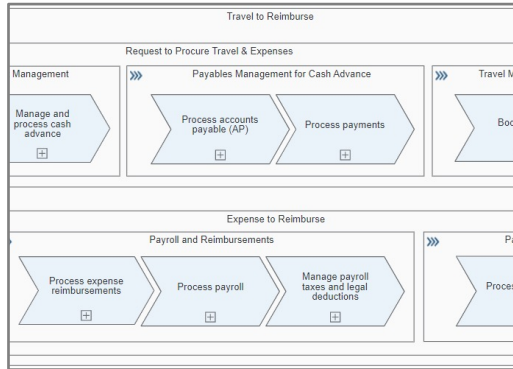
Intelligent Enterprise Program: [Travel to Reimburse for Cloud Deployment](#)

 Solution Component Diagram Solution Components <p>The Solution Component Diagram depicts all solution components needed to implement the business process variant.</p>	 Solution Value Flow Diagram Solution Process <p>The Solution Value Flow Diagram depicts all supported business activities contributing to the business process variant.</p>	 Solution Process Flow Diagram Straight Forward – Overview Flow <p>The Solution Process Flow Diagram depicts the collaboration of Solution Components to support a typical end-2-end flow</p>	 Solution Data Flow Diagram Master Data Flows <p>The Solution Data Flow Diagram depicts key flows of master and configuration data of the business process variant.</p>	 Solution Data Flow Diagram Transactional Data Flows <p>The Solution Data Flow Diagram depicts key flows of transactional data of the business process variant.</p>
<ul style="list-style-type: none"> • Show required Solution Components • Deployments (Cloud/Hybrid) • Communication Channels • <i>WIP: Navigation to Communication Scenarios (Cloud Integration Automation Service) & APIs</i> 	<ul style="list-style-type: none"> • Show supported Business Activities • Navigation to exemplary Solution Process Flows & Integration Artifacts as e.g. APIs • <i>WIP: Link to Solution Components & Capabilities</i> 	<ul style="list-style-type: none"> • <i>WIP: Direct Navigation to exemplary “Overview & Detailed Solution Process Flows” with Integration Artifacts as e.g. APIs</i> 	<ul style="list-style-type: none"> • Show integration relevant master data and typical master data flows • <i>WIP: click navigation to One Domain Model data models</i> <p>today: Explore → One Domain Model → Model Element</p>	<ul style="list-style-type: none"> • Same for transactional data • Show Document Flow within the Solution Components

Reference Solution Architecture

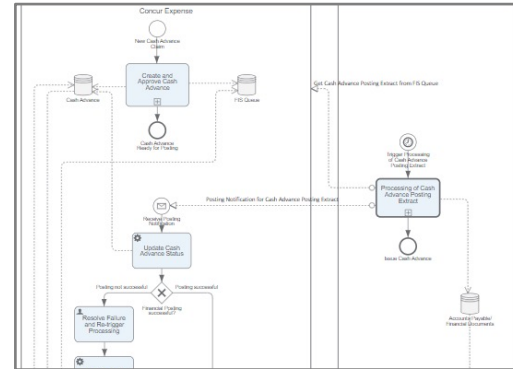
Example: From Solution Value Flow to Detailed Artifacts

Intelligent Enterprise Program: [Travel to Reimburse for Cloud Deployment](#)



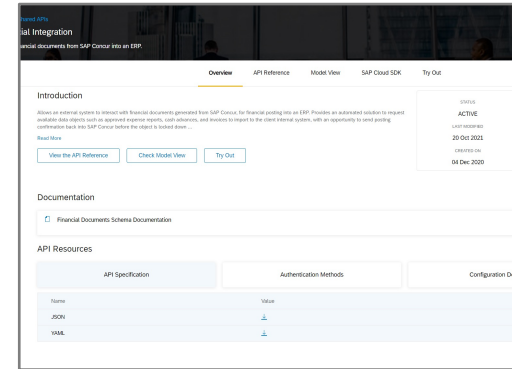
Solution Value Flow

- Show supported Business Activities
- Navigation to exemplary Solution Process Flows



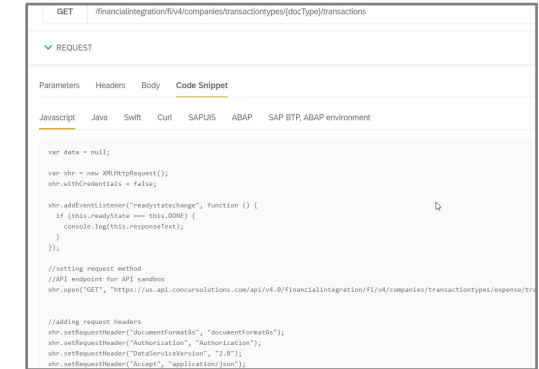
Solution Process Flow

- Overview and detailed Solution Process Flows
- Navigation to integration artifacts



Integration Artifacts

- APIs
- Detailed information



Detailed Information

- API specification, details on methods, parameters, code snippets, test support, ...

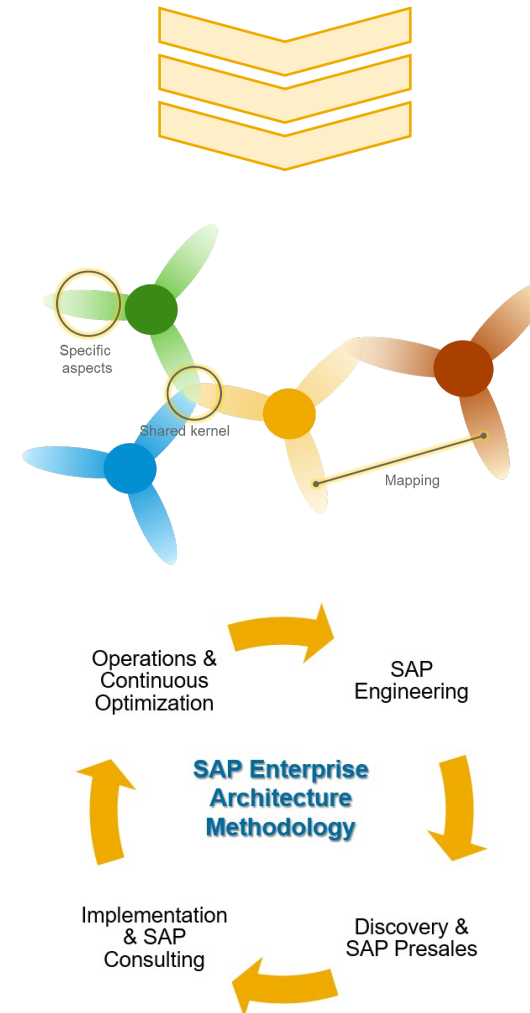
Enterprise Architecture

Implementation Support

Reference Solution Architecture

Follow SAP EA Methodology Principles

- Support the drill down to different levels of detail: from a strategic/value overview to technical details
- Bring various architecture contexts together around a common core model
- Usage of reference architecture along the software lifecycle



Reference Architecture

Consistent Usage Along the Software Lifecycle

- Discover SAP solutions
 - Understand business impact
 - Create of target and transition architecture
 - Support the implementation into exiting IT landscapes
 - + Continuously optimize optimization during operations
(Business Process Intelligence)
- Sustainable investment protection

How to Consume

**Reference Business / Solution Architecture
Content**

Consume RBA / RSA Content

Today limited to

- Mediated consumption via SAP EA services, SAP Presales
- Intelligent Enterprise Reference Solution Architecture via SAP API Business Hub

In preparation

- EA tooling
- Business Process Intelligence



SAP Enterprise Architect Global Summit

Virtual Event - March 1-3, 2022

THANK YOU

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